

WHAT IS CLAIMED IS:

1. A process of manufacturing an integrally packaged compact electronic device, comprising the steps of:

providing a substrate having a first surface and a second surface opposite to the first surface, wherein at least one semiconductor chip and at least one passive component are mounted on and electrically connected to the first surface of the substrate, and a plurality of terminals are formed on the second surface and exposed outside to serve as input/output connections of the compact electronic device;

performing an encapsulation process to form an encapsulation body on the first surface of the substrate for integrally encapsulating the chip and the passive component.

2. The process of claim 1, wherein the compact electronic device is a multimedia card (MMC).

3. The process of claim 1, wherein a plurality of the semiconductor chips are stacked to form a multi chip module (MCM) and mounted on the substrate to provide the compact electronic device with multi-functionality, good electrical properties and high-speed operation.

4. The process of claim 1, wherein the semiconductor chip is selected from the group consisting of a multimedia chip, an electrically erasable and programmable read-only memory (EEPROM) chip, and a control chip.

5. The process of claim 1, wherein the passive component is selected from the group consisting of a capacitor, a resistor, and an inductor.

6. The process of claim 1, wherein the terminal is a golden finger.

7. A process of manufacturing an integrally packaged compact electronic device, comprising the steps of:

providing a matrix substrate having a plurality of pre-defined packaging regions each for forming the compact electronic device;

mounting at least one semiconductor chip and at least one passive component on each of the packaging regions;

electrically connecting the chips and the passive components to the substrate;

placing the substrate mounted with the chips and the passive components in a mold, and forming an encapsulation body to integrally encapsulate the chips and the passive components; and

singulating the substrate to cut through the encapsulation body and separate apart the plurality of packaging regions so as to form a plurality of the compact electronic devices.

8. The process of claim 7, wherein the compact electronic device is a multimedia card (MMC).

9. The process of claim 7, wherein a plurality of the semiconductor chips are stacked to form a multi chip module (MCM) and mounted on each packaging region of the substrate to provide the compact electronic device with multi-functionality, good electrical properties and high-speed operation.

10. The process of claim 7, wherein the semiconductor chip is selected from the group consisting of a multimedia chip, an electrically erasable and programmable read-only memory (EEPROM) chip, and a control chip.

11. The process of claim 7, wherein the passive component is selected from the group consisting of a capacitor, a resistor, and an inductor.

12. A compact electronic device, comprising:

a substrate having a first surface and a second surface opposite to the first surface, wherein a plurality of conductive traces are formed on the first surface, and a plurality of terminals are formed on the second surface and exposed outside to serve as input/output connections of the compact electronic device, and wherein the conductive

traces on the first surface are electrically connected to the terminals on the second surface by a plurality of vias formed through the substrate;

at least one semiconductor chip mounted on the first surface of the substrate and electrically connected to the substrate through a plurality of conductive elements;

at least one passive component mounted on and electrically connected to the first surface of the substrate; and

an encapsulation body formed on the first surface of the substrate for integrally encapsulating the chip and the passive component.

13. The compact electronic device of claim 12, wherein the compact electronic device is a multimedia card (MMC).

14. The compact electronic device of claim 12, wherein a plurality of the semiconductor chips are stacked to form a multi chip module (MCM) and mounted on the substrate to provide the compact electronic device with multi-functionality, good electrical properties and high-speed operation.

15. The compact electronic device of claim 12, wherein the semiconductor chip is selected from the group consisting of a multimedia chip, an electrically erasable and programmable read-only memory (EEPROM) chip, and a control chip.

16. The compact electronic device of claim 12, wherein the passive component is selected from the group consisting of a capacitor, a resistor, and an inductor.

17. The compact electronic device of claim 12, wherein the conductive element is a conductive wire.

18. The compact electric device of claim 12, wherein the terminal is a golden finger.